

AMENDMENTS TO THE SPECIFICATION

Page 1, before the first line please insert the following:

This is a National Stage application under 35 U.S.C. § 371 of PCT/KR2004/000545 filed on March 15, 2004, which claims priority from Korean Patent Application 10-2003-0079897 filed November 12, 2003, all of which are incorporated herein by reference.

Page 1, please replace the first paragraph with the following paragraph:

The present invention relates to a chimeric ligand in the form of a fusion polypeptide of a retrovirus envelope glycoprotein and a single chain antibody capable of specifically binding to a surface antigen of a tumor associated glycoprotein; an expression vector comprising a gene encoding said ~~chimeric~~chimeric ligand; a packaging cell line transduced with said expression vector; a recombinant retrovirus produced by said packaging cell line; and a pharmaceutical composition comprising said chimeric ligand as an effective ingredient.

Page 15, please replace the second paragraph the bridges onto page 16 with the following paragraph:

Human kidney epithelial cells such as 293 or 293T cells were distributed on a 6-well plate at a concentration of 2×10^5 cells/well one day before transfection, and subjected to transfection with the recombinant retroviral vector pHEFvGEL199, respectively, using ~~lipofectamin plus~~LIPOFECTAMIN PLUS[®] (a transfection reagent) (Invitrogen, USA) according to the manufacture's instruction. At this time, cells transduced with pHEGEL vector were employed as a control which do not express the chimeric ligand. The transduced cells were cultured in DMEM (Dulbecco's modified Eagle's medium, Gibco BRL) supplemented with 10%

fetal bovine serum (FBS, HyClone), 100 U/ml of penicillin G and 0.1 mg/ml streptomycin at 37°C for 3 to 6 hrs. After the cells were transferred into a fresh medium and further cultured for 2 days, the cultured cells were harvested and subjected to centrifugation to isolate cell pellets. The cell pellets were suspended in 100 µl of phosphate buffer solution (PBS) and an equal volume of SDS-PAGE sample buffer solution (4% SDS, 20% glycerol, 10% β-mercaptoethanol, 0.05% bromo phenol blue, 125 mM Tris-HCl, pH 6.8) was added to the cell suspension. The sample was subjected to electrophoresis, and western blot analysis was conducted to examine the expression of fusion chimeric ligand.

Page 16, please replace the first paragraph the bridges onto page 17, with the following paragraph:

SDS-PAGE was carried out according to the method of Laemmli (Laemmli, U.K., *Nature* 277: 680-685, 1970). The fusion chimeric ligand developed on the electrophoresis gel was transferred to a PVDF membrane using a transfer buffer solution (10 mM glycine, 20% methanol, 0.1% SDS, 100 mM Tris-HCl) under an electric current of 80 V for 3 hrs. Western blot analysis was carried out according to the method of Towbin (Towbin, H. et al., *Proc. Natl. Acad. Sci. USA* 76: 4350-4354, 1979). The membrane blot was washed with a TBST buffer solution (150 mM NaCl, 0.1% tween 20, 20 mM Tris-HCl, pH 7.4) for 5 min and soaked in the TBST buffer solution supplemented with 5% (w/v) non-fat milk powder (TTM-5%) at 4°C overnight. A mouse monoclonal antibody raised against the PreS 1 epitope (Aprogen, KOREA) of SEQ ID NO: 9 tagged at the C-terminal of ScFv was employed as a primary antibody to confirm the expression of ScFv-GaLV Env glycoprotein fusion chimeric ligand FvGEL199. The

primary antibody was diluted with a TTM-5% buffer solution in a ratio ranging from 1: 1,000 to 1: 4,000, and reacted with the PVDF membrane at room temperature for 3 hrs. The membrane was washed three times with a TTM-0.5% buffer solution at an interval of 10 min, and reacted with a secondary antibody at room temperature for 3 hrs, the secondary antibody being prepared by diluting HRP-conjugated goat antibody anti mouse IgG with a TTM-0.5% buffer solution in a ratio ranging from 1: 1,000 to 1: 2,000. After the reaction was completed, the membrane was washed five times with a TTM-0.5% buffer solution at an interval of 10 min, and then, washed with a TBS buffer solution (150 mM NaCl, 20 mM Tris-HCl, pH 7.4) for 5 min. Immunoblot analysis was carried out using a chemiluminescence system (SantaCruz) and ~~Kodak~~ BiomaxKODAK BIOMAX MR[®] film according to the manufacture's instruction. The molecular weight of protein was measured by using a prestained protein marker (Bio-Rad) during the electrophoration.